

9.0 MEPA DRAFT SECTION 61 FINDINGS (M.G.L. C. 30 § 61)

The MEPA regulations at 301 CMR 11.07(6)(k) require that the Proponent provide “Proposed Section 61 Findings” in the Environmental Impact Report. Each Agency of the Commonwealth, provided an Agency Action is to be made on the subject project (i.e. permit issuance), must make a finding pursuant to M.G.L. Chapter 30, § 61 that, “all feasible measures have been taken by the project Proponent to avoid Damage to the Environment or, to the extent Damage to the Environment cannot be avoided, to minimize and mitigate Damage to the Environment to the maximum extent practicable.” These Section 61 Findings must also specify the entity responsible for funding and implementing any such mitigation measures, and the anticipated mitigation implementation schedule.

As discussed in Section 7.0, the Project will/may require Agency Actions by the following Massachusetts State Agencies:

- **Massachusetts Department of Environmental Protection (MADEP), Waterways Regulation Program**, for a Chapter 91 Waterways License Application pursuant to M.G.L. Chapter 91 and its regulations at 310 CMR 9.00.
- **MADEP, Wetlands Program**, for a Water Quality Certification (Dredging Project) pursuant to 314 CMR 9.00.
- **Massachusetts Energy Facilities Siting Board**, for a Certificate of Environmental Impact and Public Need pursuant to 980 CMR 1.00-12.00.
- **Massachusetts Highway Department**, for a Permit to Access State Highway and Access Agreement pursuant to M.G.L. Chapter 81 § 21.
- **Massachusetts Historical Commission**, for Permits to conduct an Upland Reconnaissance Archeological Survey and an Upland Intensive Archaeological Survey pursuant to M.G.L. c. 9 § 27C and its regulations 950 CMR 70.00.
- **Massachusetts Board of Underwater Archaeology**, for a Reconnaissance and Excavation Permit pursuant to M.G.L. c. 6 §§ 179-180 and its regulations 312 CMR 2.0-2.15.

The proposed mitigation measures for the entire Project are discussed and described in detail in Sections 5.0 and 6.0 of the DEIS-DEIR. The following sections provide a summary of proposed mitigation measures by subject matter for only that portion of the Project subject to Massachusetts’ state jurisdiction (i.e.: that portion of the interconnecting transmission cable landward of the offshore 3-mile territorial limit). These mitigation measures, taken together with the alternatives analysis discussed in Section 3.0, are the basis upon which Section 61 Findings may be made by each Agency. All mitigation measures will be funded and implemented by Cape Wind Associates, its Agents, Representatives, and/or Contractors. From the start of construction, a financial instrument will be in place to ensure that sufficient funds are available for removal of equipment and associated material.

9.1 Mitigation for Potential Geology and Sediment Impacts

The following is a comprehensive summary of the proposed mitigation for potential impacts to geology and sediment as a result of the Cape Wind Project:

- The proposed method of installation for the submarine cable system is hydraulic jet plow embedment. This method of simultaneously laying and burying the cables ensures the placement of the submarine cable system at the target burial depth with minimal bottom disturbance.
- HDD will be used to avoid impacts to the shoreline and intertidal zone. A temporary cofferdam will be used during construction to minimize sediment resuspension at the interface between the HDD conduit and submarine cable system.
- To minimize the release of the bentonite drilling fluid into Lewis Bay during HDD, freshwater will be used as a drilling fluid to the extent practicable prior to the drill bit or the reamer emerging in the pre-excavated pit. This will be accomplished by pumping the bentonite slurry out of the bore hole, and replacing it with freshwater as the drill bit nears the pre-excavated pit. Prior to drill exit and while the potential for bentonite release exists, diver teams will install a water-filled temporary dam around the exit point to act as an underwater “silt fence”. This dam will contain any bentonite fluid that may escape when it sinks to the bottom of the pre-excavated pit to allow easy clean-up using high-capacity vacuum systems.

- The following preventative/contingency plans and surveys will be in place during Project construction/decommissioning and operation to prevent and/or assess erosion and sedimentation, respond if a release to the environment occurs, and ensure proper operation and maintenance of equipment. These plans and surveys are likely to include:
 - **Spill Prevention Control and Countermeasure (SPCC) Plan** – The Applicant will prepare a SPCC Plan that will detail the means to prevent, control, and mitigate releases to the environment. The SPCC Plan will be implemented during Project construction/decommissioning and operation to prevent/control potential impacts to seabed sediments, wetlands, and water quality that could result from spills of fuel, lubricating oils, or other substances associated with the use of construction vehicles/vessels and other equipment and machinery. In the event of a release, clean up measures will be employed to minimize impacts to the environment and assure the protection of any people and wildlife in the immediate area.
 - **Stormwater Pollution Prevention Plan (SWPPP)** – The Applicant will prepare a SWPPP which describes erosion and sedimentation controls to be used during Project construction/decommissioning and incorporates applicable best management practices (BMPs) for erosion control and stormwater management during construction.
 - **Operation and Maintenance (O&M) Plan** – The Applicant will prepare an O&M Plan that will detail standard operating and maintenance protocols to ensure proper operation of Wind Park facilities. The O&M Plan will specify operating guidelines, maintenance schedules, and materials approved for maintenance activities. The maintenance program will include preventive and emergency maintenance functions including shore-based predictive maintenance analysis of the WTGs and ESP. The O&M Plan will provide operations and maintenance support of all Wind Park components including the ESP and submarine transmission cables and will include a detailed wind park security plan.
 - **Bathymetric Survey** – Following construction, the applicant will conduct a bathymetric survey of limited portions of the same representative reaches used to document pre-construction conditions within the Project Area (see Section 6.1.1) to assess post-construction seabed elevation and surface conditions. Sediment profile images will be taken at a representative sub-set of the sample stations used to document pre-construction conditions in order to assess post-construction seabed physical conditions and benthic habitat quality.

9.2 Benthic and Shellfish Impacts

The following is a comprehensive summary of the proposed mitigation for potential impacts on benthic and shellfish resources as a result of the Cape Wind Project:

- Impacts to the benthic community will be minimized through the use of hydraulic jet plow technology in offshore areas and through the use of HDD methodology under the intertidal zone and shoreline.
- Impacts to shellfish resources in Lewis Bay from jet plowing are expected to be localized, short-term, and minimal. The direct impacts from jet plow disturbance will be limited to the area within and in the immediate vicinity of the jet plow cable embedment.
- Due to the limited and short-term nature of the jet plow activity, temporary and localized increases in sediment deposition and suspended sediment concentrations are expected to have minimal impacts to shellfish in Lewis Bay.
- The Applicant will work with the Town Shellfish Constable to appropriately avoid or minimize impacts to designated shellfish areas from installation of the submarine cable.
- The Applicant will provide the Town of Yarmouth with funds to mitigate through reseeded for the direct area of impact within the Town's designated recreational shellfish bed in accordance with the Town's mitigation policies.
- Potential conflict with commercial lobstering activity and gear, if there is any in the Project Area at the time of construction, will be minimized by notifying registered lobster fishers well in advance of mobilization as well

as daily radio broadcast updates on marine channel 16 as to the location and timeframe of Project construction activities.

- The proposed submarine cable route avoids privately licensed shellfish areas or grants in Lewis Bay.
- Potential thermal impacts will be minimized by proper cable system design and burial of cables a minimum of 6 feet beneath the seafloor.

9.3 Mitigation for Potential Fisheries Impacts

The following is a comprehensive summary of the proposed mitigation for potential impacts on fisheries as a result of the Cape Wind Project:

- Installation of the submarine cables by hydraulic jet plow embedment minimizes sediment disturbance and suspension and results in only temporary impacts to finfish resources and habitat in and immediately adjacent to the cable installation areas. The jet plow method is considered to be the most effective and least environmentally damaging alternative when compared to traditional mechanical dredging and trenching operations. This method of laying and burying the cables simultaneously ensures the placement of the submarine cables at the target burial depth with minimum bottom disturbance and the majority of fluidized sediment settling back into the trench.
- Impacts to finfish and finfish habitat within the intertidal zone and near-shore area in Lewis Bay will be minimized by using HDD methodology to transition the submarine cable system to the upland.
- To avoid or minimize impacts to the commercial fishing industry, the submarine cable system will be buried to a minimum of 6 feet below the seabed to avoid the potential for conflicts with fishing vessels and gear operation.
- The Applicant will work cooperatively with commercial/recreational fishing agencies and interests to ensure that the construction and operation of the Project will minimize potential impacts to commercial and recreational fishing interests. Potential conflict with commercial fishing activity and gear, will be minimized by notifying registered fishermen well in advance of mobilization as well as daily radio broadcast updates on marine channel 16 as to the location and timeframe of Project construction activities.

9.4 Mitigation for Potential Impacts to Protected Marine Species

The following is a comprehensive summary of the proposed mitigation for potential impacts on protected marine species as a result of the Cape Wind Project:

- Vessels transporting construction materials and crew to the Project site in Nantucket Sound will travel at relatively slow speeds, usually well below 14 knots.
- Potential vessel impacts to marine mammals or sea turtles will be further minimized by requiring that Project vessels follow NOAA whale watching procedures¹⁰² while in transit to and from the Project area so as not to disturb any individuals that may be in the area.
- While limited localized impacts are anticipated during Project construction and operation, measures will be implemented to prevent and minimize these impacts. These measures include posting a NMFS-certified observer on-site during initial construction activities, using state-of-the-art hydraulic jet plow technology for cable installation, and post-construction monitoring to document habitat disturbance and recovery.
- The presence of sea turtles and marine mammals in the Project Area and observed reactions of these animals to the Project will be documented during the conduct of post-construction avian field surveys

9.5 Mitigation for Potential Impacts to Terrestrial Ecology, Wildlife, and Protected Species

The following is a comprehensive summary of the proposed mitigation program for potential impacts on terrestrial ecology, wildlife, and protected species as a result of the Cape Wind Project:

¹⁰² <http://www.nero.nmfs.gov/ro/doc/nr051999.pdf>

- The Applicant will coordinate with the Yarmouth and Barnstable Conservation Commissions, the MADEP, and NHESP as appropriate to prevent impacts to state-listed species during construction/decommissioning and operation the Project.
- A pre-construction survey was performed to document the occurrence of state-listed rare species along the NSTAR Electric ROW route. Should a state-listed species be located within the proposed transmission line route, a Conservation Permit under MESA will be obtained and efforts will be made to eliminate, minimize, or mitigate for any potential impacts.
- Site- and species-specific habitat requirements will be incorporated into the construction methods for the proposed route in order to avoid impacts to the state-listed plant and animal species and habitat.
- Post-construction monitoring will document habitat disturbance and recovery.
- In the event that a state-listed rare species is identified within the footprint of the upland transmission cable route, post-construction monitoring of these species will be conducted according to a Conservation Plan developed to document habitat disturbance and recovery. These monitoring efforts may be repeated periodically on an on-going basis to determine that recovery has occurred.

9.6 Mitigation for Potential Avian Impacts

The following is a comprehensive summary of the proposed mitigation for potential impacts on avian resources as a result of the Cape Wind Project:

- The Project has been planned, sited, and designed to avoid or minimize impacts to avian species and habitat, including protected avian species.
- Plans and methodology for post-construction monitoring will be developed ensure that the Project is in compliance with regulations protecting avian species. The principal purposes of this monitoring will be to collect data related to avian habitat loss or mortality and to investigate methods for measuring and mitigating any such effects.
- Post-construction field surveys will be conducted to quantitatively assess bird resources and patterns of use in the Project Area. These surveys will span a 12-month period to capture variability in seasonal use.

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9.7 Mitigation for Potential Impacts to Freshwater and Coastal Resources

The following is a comprehensive summary of the proposed mitigation for potential impacts on freshwater and coastal resources as a result of the Cape Wind Project:

- Direct wetland impacts will be minimized through the use of hydraulic jet plowing, HDD, and installation of the upland transmission line within existing paved roadways or disturbed electric ROWs.
- The use of hydraulic jet plowing within Nantucket Sound and Lewis Bay and HDD at the landfall will minimize sediment disturbance and avoid direct impacts to shoreline and coastal wetland resource areas at the submarine cable landfall. Staging areas and the transitional cable vault will be located in the upland.
- The submarine cable system will be installed by hydraulic jet plowing, which is not anticipated to substantially alter the contours of the area. The submarine cable system will be routed to avoid areas of submerged aquatic vegetation mapped as part of the MADEP Eelgrass Mapping Inventory (1995). Field investigation has been conducted to determine the extent of SAV beds in the vicinity of the proposed submarine cable system route and to modify the proposed route accordingly to avoid direct impacts. Potential indirect impacts to SAV as a result of sediment resuspension will be minimized by maintaining an appropriate distance between the proposed jet plow embedment and the mapped SAV beds. The submarine cable system will be no closer than 70 feet from the edge of the eel grass bed located near Egg Island.
- The Applicant will work with the Barnstable and Yarmouth Town Shellfish Constables to appropriately avoid and minimize impacts to designated shellfish areas from installation of the submarine cable.

- The Applicant will work with the Shellfish Constables of Yarmouth and Barnstable to mitigate for any short-term impacts to shellfish productivity. Mitigation may include reseeding or relocation of shellfish to a suitable location approved by the shellfish constable(s) and the Department of Marine Fisheries.
- Prior to construction, an erosion and sedimentation control barrier will be installed to protect the adjacent salt marshes during the construction phase of the Project.
- To minimize the potential for erosion during construction, mitigation measures such as hay bales and silt fences will be placed as appropriate around disturbed areas and any stockpiled soils. Prior to commencing construction activities, erosion control devices will be installed between the work areas and down-slope waterbodies and wetlands to reduce the risk of soil erosion and siltation.
- An Erosion and Sedimentation Control Plan and a Storm Water Management Plan will be developed which will incorporate applicable BMPs for erosion control and storm water management during construction.
- A Dewatering Plan, if necessary, will be prepared to address the procedures for handling of any water encountered during excavation.
- Measures will be taken to restore vegetation and contours to pre-existing conditions. Trenches within paved roadways will be backfilled and repaved, and trenches within the maintained electric ROW will be backfilled and seeded.
- The transmission line will not contain any fluids, petroleums, oils, or lubricants. As such, there is no threat to groundwater or surface water from the installation, presence, or future maintenance of the transmission line and/or associated infrastructure.
- Water quality will be protected during the construction phase of the Project through the installation and maintenance of erosion and sedimentation control barriers. These mitigation measures will be fully described in an Erosion and Sedimentation Control and Storm Water Management Plan.
- Mapped SAV resources were reviewed relative to the bathymetric survey results to document pre-construction SAV conditions. To supplement this existing information, a diver survey was conducted (WHG July 2003) to locate SAV limits and densities for representative areas. Prior to the start of installation of the submarine cable system, an additional pre-construction SAV survey will be conducted to verify the limits of SAV previously surveyed in July of 2003.
- Should SAV beds be identified in the vicinity of the proposed submarine cable system route, a post-construction monitoring plan will be developed to document potential indirect impacts from cable embedment and subsequent habitat recovery. Habitat recovery would be considered successful if it is found that SAV has migrated back to the site of disturbance. Should the habitat not recover naturally, the disturbance will be mitigated by replanting.

9.8 Mitigation for Potential Impacts to Water Quality

The following is a comprehensive summary of the proposed mitigation for potential impacts to water quality as a result of the Cape Wind Project:

- No adverse impact to water quality is anticipated as a result of the Project, and the Project will involve no activities subject to review under Section 404.
- SWPPP, SPCC, and O&M Plans will be implemented prior to and during construction/ decommissioning and operation to prevent potential impacts to water quality that could result from improper stormwater management, spills of fuel, lubricating oils, or other substances associated with the use of marine vessels and other equipment and machinery, and erosion / sedimentation. These plans will include specific guidance for contractors and operators in the prevention of and response to erosion/sedimentation and releases of contaminants to waterbodies and resource areas. The O&M Plan will detail standard operating and maintenance protocols to ensure proper operation of wind park facilities. These plans will be prepared and submitted to the appropriate review agencies prior to the start of construction.
- Potential water quality impacts will be limited to temporary localized sediment disturbance along the proposed submarine cable system route during cable installation. Installation of transmission cables by jet

plow embedment would result in temporary and localized impacts to water quality through sediment suspension, transport, and deposition.

- The transition of the interconnecting 115 kV submarine transmission lines from water to land will be accomplished through the use of HDD methodology in order to minimize disturbance within the intertidal zone and nearshore area.
- To minimize the release of the bentonite drilling fluid into Lewis Bay during HDD, freshwater will be used as a drilling fluid to the extent practicable prior to the drill bit or the reamer emerging in the pre-excavated pit. This will be accomplished by pumping the bentonite slurry out of the bore hole, and replacing it with freshwater as the drill bit nears the pre-excavated pit. Prior to drill exit and while the potential for bentonite release exists, diver teams will install a water-filled temporary dam around the exit point to act as an underwater "silt fence". This dam will contain any bentonite fluid that may escape when it sinks to the bottom of the pre-excavated pit to allow easy clean-up using high-capacity vacuum systems.
- During upland trenching, sedimentation and erosion controls will be installed to prevent migration of soils and sediments away from the work area and toward adjacent resource areas. Runoff will be directed to appropriately designed sedimentation and stormwater detention basins outside of wetland resource areas. Erosion control measures will also be installed downslope of any temporarily stockpiled soils in the vicinity of waterbodies and wetlands. When trenching is complete, disturbed areas will be stabilized using appropriate means to prevent erosion until the areas can be stabilized according to their previous and continued use (graded roadbed, etc.). It is possible that dewatering of the excavated trench or vault locations close to the transition point will be required because of high groundwater. A dewatering plan will be prepared to address the procedures for handling of any water encountered during excavation. In all cases, dewatering will be conducted outside of wetland resource areas and in a manner protective of water quality.

9.9 Mitigation for Potential Impacts to Visual, Cultural and Archaeological Resources

The following is a comprehensive summary of the proposed mitigation for potential impacts to visual, cultural and archaeological resources as a result of the Cape Wind Project:

- The 115 kV marine transmission route has been shifted to the west to avoid several reported shipwrecks on Bishop and Clerk's Shoals.
- The upland transmission route will be located entirely below ground within paved roads and existing utility ROWs to avoid visual impacts and impacts to potential unidentified archaeological resources.
- Additional siting modifications may be made as necessary to avoid cultural resources based on the results of marine and terrestrial archaeological studies.
- Adverse impacts to cultural resources determined to be significant (i.e., listed or eligible for listing on the National Register of Historic Places) will be avoided, minimized or mitigated in consultation with the USACE and the SHPO. For those significant cultural resources for which adverse Project effects cannot be avoided, a Memorandum of Agreement detailing methods to mitigate potential impacts may be required, in consultation with SHPO and USACE.

9.10 Mitigation for Potential Impacts from Noise

The following is a comprehensive summary of the proposed mitigation program for potential impacts from noise as a result of the Cape Wind Project:

- Noise mitigation for upland construction activity will consist of scheduling activities during normal working hours and ensuring that all equipment has properly functioning noise mufflers.
- When working near sensitive noise receptors, construction equipment will either be shielded or located further away from the sensitive receptor.
- The jet plow embedment process for laying submarine power cables with a cable barge produces no sound beyond typical vessel traffic in Nantucket Sound.

- Noise measurements comparable to those conducted to assess pre-construction conditions will be conducted at representative locations to monitor Project noise during operation. This monitoring will be conducted in a manner sufficient to confirm that any noise limits imposed in permit conditions are met during operation.

9.11 Mitigation for Potential Transportation Impacts

The following is a comprehensive summary of the proposed mitigation for potential impacts to transportation as a result of the Cape Wind Project:

- The location of the Project will be published in the Notice to Mariners and noted on all applicable NOAA marine charts.
- The submarine cable system will be buried 6 feet below the present seabottom.
- Impacts to land based transportation will be limited and temporary in nature. A Construction Traffic Management Plan will be prepared in consultation with local and state officials to ensure that safe access is maintained for vehicular traffic during upland cable system installation.
- Installation of the upland cable system will occur outside of the height of the summer tourist season to minimize any vehicular disruption.
- Trenchless technologies will be used at major intersections and railroad crossings in order keep traffic disruptions to a minimum.
- The installation of the submarine cable system will be accomplished using low-impact jet plow embedment process. The HDD operation transitioning the transmission line from submarine to upland will be conducted from the upland area and is not expected to significantly impact marine navigation. The HDD operation from the upland landfall will have no navigational impacts associated with the installation of the conduits and landside operations. All work within the waterway will be temporary, localized and short term. Once the submarine cable system is installed, there are no anticipated impacts to commercial or recreational navigation activities since the submarine cable system will be buried approximately six feet below the seafloor. Channel widths and depths along the submarine cable system route are sufficient to allow the cable-laying vessel to operate and maneuver.

9.12 Mitigation for Potential EMF

The following is a comprehensive summary of the proposed mitigation for potential impacts of EMF as a result of the Cape Wind Project:

- All of the proposed transmission cables contain grounded metallic shields, therefore they will produce no external electric fields.
- In other transmission line siting proceedings, the State of Massachusetts Energy Facility Siting Board has applied an 85 mG magnetic field strength review criteria threshold at the edge of the ROW. The proposed transmission facilities will not produce field strength above this criterion along either the submarine or overland route or at the edge of the ROW for the existing transmission line.
- As a result of designing the Project to effectively eliminate electric fields and because economically and environmentally viable and prudent steps to reduce magnetic fields have been utilized and because the Project does not exceed established guidelines or standards for EMF, no additional mitigation is required.

9.12 Telecommunication Impacts

The following is a comprehensive summary of the proposed mitigation for potential impacts to telecommunications as a result of the Cape Wind Project:

- The proposed submarine cable system and upland transmission line associated with the Project will be buried either beneath the seafloor or on land, and the only potential aboveground section of the 115 kV transmission line is located at the interconnection with the existing Barnstable Switching Station. Most telecommunication devices operate on a line-of-sight basis, meaning that the source of the transmission and

the receiving antennae communicate in a linear path. Therefore, no interference with the telecommunications towers, marine VHF radio or radar is anticipated from Project transmission lines.

9.14 Mitigation for Potential Air and Climate Impacts

The only negative air quality impacts from the project will be the emissions from powered equipment used for constructing the transmission line. Mitigation for these minor, temporary impacts will be accomplished through maintenance of construction equipment.

The power produced by the Wind Park will mitigate impacts from Massachusetts generating facilities as it will serve to reduce demand on fossil-fuel fired facilities and thereby reduce air emissions from these facilities. The proposed Wind Park would reduce the need to construct additional fossil fuel-fired electric generation facilities as energy demand increases, facilitating the Commonwealth's and the region's air quality goals while providing for economic growth. The clean energy provided by the Wind Park will serve as a mitigation measure in Massachusetts' efforts to achieve attainment of air quality standard for ozone.

9.15 Mitigation for Potential Socioeconomic Impacts

There will be no negative socio-economic impacts from the construction/decommissioning and operation of the Cape Wind Project. Thus, no mitigation is proposed.